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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,919	01/08/2002	Brett P. Masters	2001841-0011	5583

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EXAMINER	
DOUGHERTY, THOMAS M	
ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 03/06/2003

#3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/041,919	MASTERS ET AL.	
	Examiner	Art Unit	
	Thomas M. Dougherty	2834	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 17-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2 and 17-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 2 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the Paper which includes the preliminary amendment filed 01/08/02. In that paper, applicant has stated that the method claims are to be canceled, and this statement indicates that the invention is different from what is defined in the claim(s) because claim 2, which is a method claim, depends on claim 1 which has been canceled, while claims 17 to 25 which are structure claims are still pending. The merits of claim 2 has not been further considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipate by OKI Electric (JP 64-25583). Oki shows (figs. 1B and 2) an electromechanical device, comprising a substantially planar electroactive ceramic

member (18) having grooves (22) defined on a planar surface of the member, whereby the grooves (22) allow the member to conform to a curved surface.

The electromechanical device is an electromechanical sensor or actuator (see last line of BASIC-ABSTRACT).

The grooves (22) are substantially parallel and the member can conform to a cylindrical surface (24).

Claims 17, 18, 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Roshon, Jr. et al. (US 3,243768). Roshon shows (figs. 7a, 7b) an electromechanical device, comprising a substantially planar electroactive ceramic member (not numbered but supported by elements 702, 707) having grooves defined on a planar surface of the member, whereby the grooves allow the member to
conform to a curved surface (702, 707).

The electromechanical device is an electromechanical sensor or actuator (it is a transmitter/receiver).

The grooves are substantially parallel (fig. 7a) and the member can conform to a cylindrical surface (702).

The grooves are substantially concentric (fig. 7b) and the member can conform to a spherical surface (707).

Roshon et al. show (figs. 7a, 7b) an electromechanical device, comprising a substantially planar bimorph (see fig. 4) electroactive ceramic member (col. 3, ll. 38-43) having slots defined in the member, whereby the slots multiply an electromechanical bending response of the bimorph member. Note that as Roshon et al. show the claimed

structure, such operation is inherent, less the Applicants' claimed invention fails to function as claimed.

The device is an electromechanical sensor or actuator.

The slots are substantially concentric (fig. 7b).

The slots are substantially parallel (fig. 7a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over either of OKI Electric (JP 64-25583) or Roshon, Jr. et al. (US 3,243768). Given the invention of either OKI or Roshon as noted above, neither notes whether or not their electromechanical device can conform to a curved surface having a radius of curvature no greater than 0.25". It would have been an obvious matter of design choice to miniaturize either invention, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105, USPQ 237 (CCPA 1955).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining prior art cited reads on at least some aspects of the claimed invention.

Direct inquires to Examiner Dougherty at (703) 308-1628.

tmd

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March 5, 2003

Thomas M. Dougherty

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